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PATENT

CLAIMS

We claim:

1. An isolated nucleic acid molecule comprising
 - (a) a nucleic acid molecule comprising a nucleic acid sequence that encodes
5 an amino acid sequence of SEQ ID NO: 154 through 266;
 - (b) a nucleic acid molecule comprising a nucleic acid sequence of SEQ ID
NO: 1 through 153;
 - (c) a nucleic acid molecule that selectively hybridizes to the nucleic acid
molecule of (a) or (b); or
 - 10 (d) a nucleic acid molecule having at least 60% sequence identity to the nucleic
acid molecule of (a) or (b).
2. The nucleic acid molecule according to claim 1, wherein the nucleic acid
molecule is a cDNA.
- 15 3. The nucleic acid molecule according to claim 1, wherein the nucleic acid
molecule is genomic DNA.
4. The nucleic acid molecule according to claim 1, wherein the nucleic acid
20 molecule is a mammalian nucleic acid molecule.
5. The nucleic acid molecule according to claim 4, wherein the nucleic acid
molecule is a human nucleic acid molecule.
- 25 6. A method for determining the presence of a breast specific nucleic acid
(BSNA) in a sample, comprising the steps of:
 - (a) contacting the sample with the nucleic acid molecule according to claim 1
under conditions in which the nucleic acid molecule will selectively hybridize to a breast
specific nucleic acid; and
 - 30 (b) detecting hybridization of the nucleic acid molecule to a BSNA in the
sample, wherein the detection of the hybridization indicates the presence of a BSNA in
the sample.

7. A vector comprising the nucleic acid molecule of claim 1.

8. A host cell comprising the vector according to claim 7.

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9. A method for producing a polypeptide encoded by the nucleic acid molecule according to claim 1, comprising the steps of (a) providing a host cell comprising the nucleic acid molecule operably linked to one or more expression control sequences, and (b) incubating the host cell under conditions in which the polypeptide is produced.

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10. A polypeptide encoded by the nucleic acid molecule according to claim 1.

11. An isolated polypeptide selected from the group consisting of:

(a) a polypeptide comprising an amino acid sequence with at least 60% sequence identity to of SEQ ID NO: 154 through 266; or

(b) a polypeptide comprising an amino acid sequence encoded by a nucleic acid molecule comprising a nucleic acid sequence of SEQ ID NO: 1 through 153.

12. An antibody or fragment thereof that specifically binds to the polypeptide according to claim 11.

13. A method for determining the presence of a breast specific protein in a sample, comprising the steps of:

(a) contacting the sample with the antibody according to claim 12 under conditions in which the antibody will selectively bind to the breast specific protein; and
(b) detecting binding of the antibody to a breast specific protein in the sample, wherein the detection of binding indicates the presence of a breast specific protein in the sample.

14. A method for diagnosing and monitoring the presence and metastases of breast cancer in a patient, comprising the steps of:

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